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Kyle E. Dayley

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EXAMINER

THAKUR, VIREN A

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/812,656	Applicant(s) DAYLEY ET AL.	
	Examiner Viren Thakur	Art Unit 1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
 4a) Of the above claim(s) 21-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/18/2007; 3/30/2004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-20 in the reply filed on May 8, 2007 is acknowledged.
2. Claims 21-51 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on May 8, 2007.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Instant claims 1 and 6 recite the limitation "an angle relative to the dough piece." The limitation is unclear as to what can be considered a relative angle.

Claim 4 recites cooking following the separating step to form a sealed chamber bounded by the sealed edge, however claim 3 recites wherein the stepped cutting edge forms the dough piece with a *sealed edge*. Therefore, it is unclear as to how the dough piece can have only a sealed edge but said sealed edge forms a sealed chamber.

Claim 6 recites the limitation "...to form a dough piece retained by the cutter segment and a web scrap." The claim is unclear as to whether the dough piece only needs to be retained by the cutter segment or whether the dough piece needs to be retained by the cutter segment and a web scrap.

Instant claim 14 recites the limitation "a selected orientation relative to the dough pieces." The claim is unclear as to what is considered a selected orientation. The examiner asserts that any orientation can be considered a selected orientation. The claim is further unclear as to what orientation is considered relative to the dough piece.

Instant claim 16 recites the limitation "a plurality of features." The claim is unclear as to what can be considered a feature of the dough piece.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1, 6, 7, 9-10 and 13 rejected under 35 U.S.C. 102(b) as being anticipated by McNeel et al. (US 6412397).**

McNeel et al. discloses fabricating a snack product comprising providing a sheet of dough (Column 6, Line 31), cutting a dough piece and a web scrap in the dough sheet (Column 6, Lines 27-40). Regarding the web scrap, McNeel et al. disclose in Figure 9 "waste lace", wherein the scrap is separated moved at an angle relative to the dough piece. McNeel et al. further disclose separating the dough piece from the web scrap by directing a pressurized gas at the dough piece (Column 6, Line 49 to Column 7, Line 5). In this case, McNeel et al. use overpressure to blow the shaped dough piece from the cavity and then onto the belt assembly. By using a vacuum, the dough piece is retained by the cutter segment and the scrap is moved at an angle away from the dough piece (Figure 9, See Waste Lace). As recited in instant claim 7, McNeel et al. disclose wherein the cutter mechanism comprises a rotating cylindrical member (Figure 6, Item 112) comprising a ring (Figure 6, Item 114) having the cutting edge formed on an outside surface thereof. As recited in instant claim 9, McNeel et al. teach wherein the cutter mechanism includes a gas conduit (Figure 6, Item 118) and a gas port in the cutting segment in flow communication with the gas conduit (Figure 6, See arrows pointing inwardly and outwardly between items 118 and 116 and 114). As recited in instant claim 10, the dough piece moves away from the cutter mechanism during directing. McNeel discloses that the dough piece is "air peeled" (Column 7, Lines 1-5), and thus moves away from the cutter mechanism. Regarding instant claim 13, McNeel discloses common cutting edges on the rolling cutter mechanism (See Figure 7 and Column 3, Lines 48-49).

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7. **Claims 1, 2, 6, 8, 9 and 10 are rejected under 35 U.S.C. 103(a) as being anticipated by Ricke et al. (US 5547695).**

Ricke et al. discloses a dough sheet (Column 2, Lines 28-30), cutting a dough piece (Figure 1, Item 90) and a web scrap (Figure 1, Item 89) in the dough sheet; and separating the dough piece from the web scrap. In figure 5, the dough piece (Figure 5, Item 90) is separated from the scrap (Figure 5, Item 89). The pressurized air, further prevents the dough from sticking to the cutting element and separates the piece from the rest of the sheet (Column 1, Line 59 to Column 2, Line 9; Column 6, Lines 17-38). In light of the rejection above under 112, second paragraph, the limitation "an angle relative to the dough piece" reads on an angle of zero degrees, therefore, Ricke et al. teach wherein the web scrap moves at an angle relative to the dough piece. Nevertheless, Ricke et al. also disclose after cutting of the dough piece wherein the scrap (Figure 1, Item 89) moves away from the dough piece. Regarding instant claims 2 and 8, Ricke et al. disclose a stepped cutting edge (Figure 7, Item 213 and 211). Regarding instant claim 9, Ricke et al. disclose wherein the cutter mechanism includes a gas conduit (Figure 4, Item 230 and Item 237) and a gas port in the cutting segment in flow communication with the gas conduit (Figure 3, Item 265 and 275). The Examiner notes, that the language "configured to" is functional language and thus if the prior art meets the structure of the limitation, then said prior art would have been capable of performing the disclosed functional language. In this case, since the prior art discloses a gas port in flow communication with the gas conduit, said gas port and conduit would have been configured and thus capable of performing the directing step. Regarding instant claim 10, the dough piece moves away from the cutter mechanism since the air pushes the dough piece out of the cutting element to prevent it from sticking to the cutter element.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claim 1-10, 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavan (US 6168817) in view of Fay (US 4212609).

Regarding instant claims 1, 6 and 14, Pavan teaches providing a dough sheet (Figure 1, Item 12), cutting a dough piece (Figure 1, Item 34) and a web scrap (Figure 1, Item 35) in the dough sheet and separating the dough piece (Figure 1, Item 34) from the web scrap (Figure 1, Item 35) while moving the web scrap at an angle relative to the dough piece (Figure 1, Item 35).

Pavan is silent in teaching separating the dough by directing a pressurized gas at the dough piece, as recited in instant claims 1, 6 and 14; Pavan is further silent in teaching wherein the cutter mechanism includes a gas conduit, and a gas port in the cutting segment in flow communication with the gas conduit, the gas conduit and the gas port configured to perform the directing step, as recited in instant claim 9.

Fay teaches a rolling cylindrical cutting element (Figure 2, Item 11) used for creating shaped food products from, for example sausage meat products (Column 1, Lines 14-15) and dough such as cookie dough (Column 1, Line 39). Fay further teaches breaking "the surface adhesion between the die and the formed substance and to prevent the food substance from adhering to the porous surface or from clogging the pores of the die member" (Column 1, Lines 28-31). As a result of using tempered air to eject the formed substance from the die cavity, Fay teaches improving forming shaped products using die cavity cutting by being able to rapidly and positively eject the shaped product from the die cavity (Column 1, Lines 10-18 and Lines 49-57). Fay further teach that the air is passed through a conduit (Figure 3, Items 50 and 51) that ejects the shaped food product from the die (Column 4, Lines 26-41).

Thus, both Fay and Pavan teach using a rolling cutter element to shape a dough based food product. Fay teach that by using air that passes through a cylindrical cutting element assists in releasing the shaped dough and further provides rapid shaping and extracting of the dough based food product (Column 1, Lines 10-18). Additionally, the air would have prevented the shaped food product from sticking within the cavity. Given these teachings it would have been obvious to one having ordinary skill in the art to provide a conduit through which the pressurized air would have communicated with the die as taught by Fay for the purpose of preventing the shaped dough product from sticking to the die cavity. As a result, the cylindrical cutting element could be used for rapid production of shaped dough products without having to stop the automated process for removing stuck pieces.

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Regarding instant claims 2, 8 and 15, Pavan teaches a stepped cutting edge (Figure 3 and Figure 4 and Figure 9, Item 31) which is pressed against the dough sheet (Figures 9 and 10). The edges disclosed in the cutting elements of Pavan are considered stepped cutting edges since they are not continuous but rather are individual edges with gaps in-between each of the cutting edges.

Regarding instant claim 3, Pavan teaches wherein the dough comprises a first and second dough layer (Figure 1, Items 12 and 13) and the stepped cutting edge forms the dough piece with a sealed edge (Figure 10). Further regarding instant claim 14, by sealing the edges as a result of the cutting, Pavan teaches a continuous crimped edge. By teaching an expanded product (Column 4, Line 23), the dough piece would have had a hollow chamber bound by the edge and the first and second dough layers.

Regarding instant claims 4 and 17, Pavan teaches cooking and further, frying (Column 4, Lines 20-24). Regarding instant claims 5 and 10, Pavan teaches moving the dough piece away from the web scrap (Figure 1, Item 33 and Item 36; Column 3, Lines 63-66 and Column 4, Lines 1-4).

Regarding instant claim 7, Pavan teaches the cutter mechanism comprising a rotating cylindrical member (Figure 9, See center of item 31). In being a cylindrical member with a hole that comprises a beam that allows the cylinder to rotate, the cylindrical cutting member further comprises a ring (Figure 9, Item 31) and on this ring lies the cutting elements. Even further, Pavan teaches wherein the cutting roller is "obtained by combining circumferential and equidistant parallel hollows with a plurality of helical hollows which cross the first hollows" (Column 3, Lines 36-41). Thus the circumferential hollows are rings on the cylindrical member on which is placed the cutting surface.

Regarding instant claim 19, Pavan teaches cutting using a plurality of cutting segments (Figure 1, Items 16, 17 and 31). The Examiner notes, that the language "for forming the dough piece and the web scrap" is functional language and thus if the prior art meets the structure of the limitation, then said prior art would have been capable of performing the disclosed functional language. In this case, since the prior art discloses a rotating cylindrical cutter mechanism having a plurality of cutting segments, said rotating cylindrical cutter mechanism would have been capable of forming the dough piece and the web scrap.

Regarding instant claim 16, Pavan teaches features on the dough piece (Figure 8) which would extend to the crimped edge when the dough sheet is cut into individual pieces.

Regarding instant claim 18, Pavan is silent in teaching wherein the thickness of the crimped edge is less than that of the dough sheet. Nevertheless, by changing the width of the dough piece (See Figure 10, Item 34), it would have been obvious to the ordinarily skilled artisan that the thickness of the crimped edge would have been less than that of the dough sheet.

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Therefore, to change the thickness of the crimped edge would have been a change in size and shape that would not have provided a patentable feature over the prior art (See MPEP 2144.04 IV A, B).

Regarding instant claim 20, Pavan teaches wherein the dough can be made from potatoes (Column 2, Line 64 to Column 2, Line 3), therefore to form two layers of the dough sheet using potato flakes would not have made a patentable feature over the prior art.

- 11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pavan (US 6168817) in view of Fay (US 4212609), as applied to claims 1-10 and 14-20, above, and in further view of Fay (US 3427649).**

Pavan and Fay '609 are taken as applied above.

Pavan is silent in teaching wherein following the directing step, performing a cleaning step by directing the pressurized gas into the cutter segment.

Fay '649 teaches maintenance of the air pressure within the die chamber for the purpose of preventing re-adhesion which occurs after the shaped food product drops from the cavity. By maintaining the air pressure after the food product as dropped substances that have a tendency to re-adhere to the cavity is prevented (Column 1, Lines 52-68). Fay '649 further teaches as one of the types of food products that is shaped using the invention is dough (Column 1, Line 50).

In summary, both Pavan and Fay '649 teach shaping dough into food products. After separating the dough using pressurized air and a wiper element, Fay '649 further teaches maintaining the air pressure to ensure that any residual of the substance does not re-adhere to the die cavity; thus ensuring that the cavity is free of any particles that would affect the next cycle of dough forming. Given these teachings, it would have been obvious to one having ordinary skill in the art to direct the pressurized gas as taught by Fay '649 into the cutter element for the purpose of preventing the re-adhesion of particulate food matter that would have re-adhered to the cutter after the shaped food product had been dropped. Such a modification would have further have provided additional consistency in the automated process since particulate food matter would not have been stuck within the cutter elements, which would have affected the shape of the dough food product in subsequent cycles.

- 12. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pavan (US 6168817) in view of Fay (US 4212609), as applied to claims 1-10 and 14-20, above, and in further view of Kuchuris (US 3536014).**

Pavan and Fay are taken as applied above.

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Pavan is silent in teaching wherein the following the directing step comprises brushing the cutting segment.

Kuchuris teaches a dough forming process for cutting designs into a dough prior to baking (Column 1, Lines 68-75). Kuchuris teaches that "there has been no satisfactory means provided for imprinting a design on wads of dough as they are fed outwardly from an automatic dough forming machine so that the design can be imprinted as a normal incident to the dough forming stage and without requiring separate manual or mechanical stations where some additional act may need to be performed which interrupts the usual flow of the baking process" (Column 1, Lines 58-65). As an additional means of ensuring that the flow of the baking process is not interrupted, Kuchuris teaches a brush (Figure 1, Item 80) which has surface contact with the cutting wheels (Figure 1, Item 62) which serves to both clean the wheels and minimize the amount of dough and flour that would have built up on the wheels, and further prevents occasional dough wads from adhering to the wheels (Column 3, Lines 69-75).

In summary, Kuchuris teaches providing contact between the cutting wheels and a brush element for the purpose of cleaning the cutting wheels while also minimizing the interruptions to the entire baking process. In this case the cleaning and removal of excess dough stuck to the cutting wheels is minimized without stopping the process. Given these teachings, it would have been obvious to one having ordinary skill in the art to have a brush contact the cylindrical cutting element of Pavan for the purpose of cleaning the cutting wheels while also minimizing the interruptions to the cooking process. Such a modification would have prevented the need for stopping the process to remove buildup or replace the cutting mechanism as a result of excess buildup that could not be removed.

13. **Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pavan (US 6168817) in view of Fay (US 4212609), as applied to claims 1-10 and 14-20, above, and in further view of McNeel (US 6412397).**

Pavan and Fay are taken as applied above.

Pavan is silent in teaching wherein the cutter mechanism comprises a plurality of cutting segments having a plurality of common cutting edges.

McNeel teach providing common cutting edges to a roller cutter mechanism for sheets of dough based snack products (Figure 7). As a result of the common cutting edges, a pattern of alternating tortilla pieces results (Column 6, Lines 41-58). This alternating pattern suggests to one having ordinary skill in the art that by providing common cutting edges, the amount of dough used for the first cycle of the shaping process would have been maximized and the amount of recycled scrap would have been minimized thus resulting in increased output. Maximizing the output of cut dough to thus minimize waste has been well established in the industry for

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maximizing the efficiency of the product. Given these teachings it would have been obvious to one having ordinary skill in the art to provide common cutting edges on the cutter mechanism of Pavan for the purpose of maximizing the amount of dough used during each cycle of cutting. As a result the output of shaped products would have increased per cycle thus resulting in a more efficient process.

14. Claims 1-10 and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dayley (US 5306133) in view of Bornhorst et al. (US 6174556).

Dayley teaches rotary cutting of a dough sheet comprising providing a dough sheet (Column 2, Line 16), cutting a dough piece (Figure 2, Item 30) and a web scrap in the dough sheet (Figure 2, Item 34) and separating the dough piece from the web scrap (Figure 2). The web scrap moves at an angle relative to the dough piece, as can be seen in figure 2. Additional web scraps (Figure 2, Item 32) are also separated from the dough piece (Figure 2, Item 30). Further regarding instant claim 6, Dayley teaches pressing the cutting edge against the dough sheet to form a dough piece retained by the cutter segment (Figure 2, Item 28; Figure 3), and a web scrap (Figure 2, Item 32 and 34).

Dayley is silent in teaching directing a pressurized gas at the dough piece while moving the web scrap at an angle relative to the dough piece, as recited in instant claims 1, 6 and 14. Dayley is further silent in teaching wherein the cutter mechanism includes a gas conduit and a gas port in the cutting segment in flow communication with the gas conduit, as recited in instant claim 9; wherein the dough comprises a first and second dough layer, as recited in instant claims 3 and 14; wherein the cutter mechanism comprises a plurality of cutting segments having a plurality of common cutting edges, as recited in instant claim 13; wherein the crimped edge has a thickness less than that of the dough sheet, as recited in instant claim 18.

Bornhorst et al. teach two layered snack products comprising an opening therebetween (Column 5, Line 55 to Column 6, Line 15) which are subsequently fried (Column 6, Lines 63-64). Bornhorst et al. further teach wherein the three-dimensional snack product can take any three-dimensional shape (Column 2, Lines 6-17). The three-dimensional shape is formed by combining two halves of the sheeted dough together (Column 6, Lines 25-28) and then cut by the rollers (Figure 1, Item 30). The rollers, Bornhorst et al. teach comprise common cutting edges, as can be seen in Figure 3, Item 40). Furthermore Bornhorst et al. teach wherein to overcome any tendencies of the individual snack products to remain in the cavities as a result of the stickiness of the dough, pressurized air flowing from the passage will dislodge any individual snack products which do not dislodge themselves (Column 6, Lines 36-41). The air is flowed through passageways (Figure 3, Item 54) and further comprises a port (Figure 2, see the ends of item 54). The port and passageways are in fluid communication for performing the directing. The Examiner

notes, that the language "configured to" is functional language and thus if the prior art meets the structure of the limitation, then said prior art would have been capable of performing the disclosed functional language. In this case, since the prior art discloses a gas port in flow communication with the gas conduit, said gas port and conduit would have been configured and thus capable of performing the directing step. Regarding instant claim 10, the dough piece moves away from the cutter mechanism since the air pushes the dough piece out of the cutting element to prevent it from sticking to the cutter element. Furthermore the two dough sheets are sealed together to form a sealed edge, when the two cutting wheels press the dough sheets together.

Thus, similar to Dayley, Bornhorst et al. teach frying sheets of dough and cutting sheets of dough. Regarding using pressurized gas, Bornhorst et al. teach using pressurized gas to prevent sticking of the dough to the cutting elements and Dayley teach as an object of the invention to remove the snack dough from the cutter die without damaging it (Column 1, Lines 59-62). By using the gas port and conduit, as taught by Bornhorst et al., it would have been obvious to one having ordinary skill in the art to apply pressurized gas for the purpose of releasing the dough from the cutting element without damaging it.

Regarding the dough having a first and a second dough layer, as recited in instant claims 3 and 14, Bornhorst et al. teach forming three-dimensional products using two sheets of dough to form the three dimensional product. Similar to the cone and triangle shapes taught by Bornhorst et al., Dayley teach that the cutting elements can be used to cut triangle shaped dough (Column 4, Lines 31-42). Both Bornhorst et al. and Dayley further teach frying the dough product. By using two sheets of dough, Bornhorst et al. teach products which have conical shapes that have gained wide market acceptance (Column 1, Lines 11-14). Therefore, it would have been obvious to one having ordinary skill in the art to use two sheets of dough to form the triangle shaped snack products of Dayley, as taught by Bornhorst et al. for the purpose of forming three-dimensional shaped snack products that have been widely preferred by consumers. Such a modification would have further have increased the profitability and desirability of the snack product.

Regarding the cutter segments having a plurality of common cutting edges as recited in instant claim 13, Bornhorst et al. teach continuous common cutting edges (Figure 3, Item 40). This suggests to the ordinarily skilled artisan that minimal dough resulted in scrap webs. Therefore, maximizing the output of cut dough to thus minimize waste has been well established in the industry for maximizing the efficiency of the product. Given these teachings it would have been obvious to one having ordinary skill in the art to provide common cutting edges on the cutter mechanism of Dayley for the purpose of maximizing the amount of dough used during each cycle of cutting. As a result the output of shaped products would have increased per cycle thus resulting in a more efficient process.

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Regarding the crimped edge as recited in instant claims 18, as a result of using two sheets of dough, as taught by Bornhorst et al., it would have been obvious to one having ordinary skill in the art that the edges of the two sheets of dough would have crimped, in order to form the three-dimensional food product. Nevertheless, by changing the width of the dough piece (See Figure 10, Item 34), it would have been obvious to the ordinarily skilled artisan that the thickness of the crimped edge would have been less than that of the dough sheet. Therefore, to change the thickness of the crimped edge would have been a change in size and shape that would not have provided a patentable feature over the prior art (See MPEP 2144.04 IV A, B).

Regarding instant claims 2, 8, and 15, Dayley teaches wherein the cutting step comprises pressing a stepped cutting edge against the dough sheet (Figure 6, Item 134). The stepped edge in this case is the rounded ends that provide steps to the edge of the food product. Even further still, the edges as shown in Figure 4, Item 64 and 62) are considered stepped since there is a gap in-between the edge which "steps down." The edge starts as an "up step" and then "steps down" and then "steps up" again thus teachings a stepped cutting edge.

Regarding instant claim 4 and 14, Dayley teaches cooking the dough piece and further frying (Figure 2, Item 46) as recited in instant claim 17. Regarding instant claim 4, the Examiner notes that the claim recites cooking the dough piece. The language "to form a sealed chamber bounded by the sealed edge" is considered functional language and thus if the prior art meets the structure of the limitation, then said prior art would have been capable of performing the disclosed functional language. In this case, since the prior art discloses a sealed edge, upon cooking the prior art would have been capable of performing a sealed chamber bounded by the sealed edge.

Regarding instant claim 5, Dayley teaches moving the dough piece (Figure 1, Item 30) away from the web scrap (Figure 2, Item 32 and Item 34).

Regarding instant claim 7, Dayley teaches wherein the cutter mechanism comprises a rotating cylindrical member (Figure 3, see cylindrical rod in the middle of the auger) comprising a ring (Figure 3, Item 52) having the cutting edge (Figure 3, Item 58) formed on an outside surface thereof.

Regarding instant claim 10, Dayley teaches moving the dough piece away from the cutter mechanism during the directing step (See Figure 2). In this case the dough piece moves to the right on the conveyor belt away from the cutter mechanism.

Regarding instant claim 16, Dayley teaches wherein the dough piece includes a plurality of features as a result of the shape of the cutting element (Figure 6).

Regarding instant claim 19, Dayley teaches wherein the cutting step is performed using a rotating cylindrical cutter mechanism (Figure 3, Item 28) having a plurality of cutting segments (Figure 3, Item 58).

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15. **Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dayley (US 5306133) in view of Bornhorst et al. (US 6174556), as applied to claims 1-10 and 13-20, above, and in further view of Fay (US 3427649).**

Dayley and Bornhorst et al. are taken as applied above. Dayley is silent in teaching wherein, following the directing step, performing a cleaning step by directing the pressurized gas into the cutter segment.

Fay teaches maintenance of the air pressure within the die chamber for the purpose of preventing re-adhesion which occurs after the shaped food product drops from the cavity. By maintaining the air pressure after the food product as dropped substances that have a tendency to re-adhere to the cavity is prevented (Column 1, Lines 52-68). Fay further teaches as one of the types of food products that is shaped using the invention is dough (Column 1, Line 50).

In summary, both Dayley and Fay teach shaping dough into food products. After separating the dough using pressurized air and a wiper element, Fay '649 further teaches maintaining the air pressure to ensure that any residual of the substance does not re-adhere to the die cavity; thus ensuring that the cavity is free of any particles that would affect the next cycle of dough forming. Given these teachings, it would have been obvious to one having ordinary skill in the art to direct the pressurized gas as taught by Fay into the cutter element for the purpose of preventing the re-adhesion of particulate food matter that would have re-adhered to the cutter after the shaped food product had been dropped. Such a modification would have further have provided additional consistency in the automated process since particulate food matter would not have been stuck within the cutter elements, which would have affected the shape of the dough food product in subsequent cycles.

16. **Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dayley (US 5306133) in view of Bornhorst et al. (US 6174556), as applied to claims 1-10 and 13-20, above, and in further view of Kuchuris (US 3536014).**

Dayley and Bornhorst et al. are taken as applied above.

Dayley is silent in teaching wherein the following the directing step comprises brushing the cutting segment.

Kuchuris teaches a dough forming process for cutting designs into a dough prior to baking (Column 1, Lines 68-75). Kuchuris teaches that "there has been no satisfactory means provided for imprinting a design on wads of dough as they are fed outwardly from an automatic dough forming machine so that the design can be imprinted as a normal incident to the dough forming stage and without requiring separate manual or mechanical stations where some additional act may need to be performed which interrupts the usual flow of the baking process"

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(Column 1, Lines 58-65). As an additional means of ensuring that the flow of the baking process is not interrupted, Kuchuris teaches a brush (Figure 1, Item 80) which has surface contact with the cutting wheels (Figure 1, Item 62) which serves to both clean the wheels and minimize the amount of dough and flour that would have built up on the wheels, and further prevents occasional dough wads from adhering to the wheels (Column 3, Lines 69-75).

In summary, Kuchuris teaches providing contact between the cutting wheels and a brush element for the purpose of cleaning the cutting wheels while also minimizing the interruptions to the entire baking process. In this case the cleaning and removal of excess dough stuck to the cutting wheels is minimized without stopping the process. Given these teachings, it would have been obvious to one having ordinary skill in the art to have a brush contact the cylindrical cutting element of Dayley for the purpose of cleaning the cutting wheels while also minimizing the interruptions to the cooking process. Such a modification would have prevented the need for stopping the process to remove buildup or replace the cutting mechanism as a result of excess buildup that could not be removed.

Double Patenting

17. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

18. **Claims 1-3, 5-6, and 12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8, 10-18 and 20-28 of copending Application No. 10/822,038.** Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-8, 10-18 and 20-28 encompass the limitations of instant claims 1-3, 5-6, 12, 14-15 and 19.

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Regarding instant claims 5 however, copending Application No. 10/822,038 is silent in teaching a cooking step. Since the claims of copending Application No. 10/822,038 teaches separating and cutting shaped forms from a dual sheeted dough, it would have been obvious to one having ordinary skill in the art to cook the dual sheeted dough after separating.

Regarding instant claim 2, by teaching a cylindrical cutter having rows of character-shaped cut-outs on its surface, it would have been obvious to one having ordinary skill in the art that the character shaped cut-outs provide a stepped surface on the cutting edge. In this case, by providing multiple cutting edges that extend from the surface of the cylinder, copending Application No. 10/822038 teaches a stepped cutting edge.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

19. **Claim 14-15, 17 and 19-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8, 10-18 and 20-28 of copending Application No. 10/822038 in view of Pavan (US 6168817).**

Copending Application No. 10/822038 is taken as applied above.

Copending Application No. 10/822038 is silent in teaching a cooking step and further wherein the cooking step is frying and wherein the dough piece expands when cooked.

Pavan teaches frying dual sheeted dough (Column 1, Line 66 to Column 2, Line 11). Pavan further teaches cutting the dual sheeted dough using a stepped cutting edge (Figure 3, Figure 4 and Figure 9, Item 31). The dual sheeted dough can further be made of potato and used to make three-dimensional snacks (Column 2, Line 1). Therefore, it would have been obvious to one having ordinary skill in the art to fry the dual sheeted dough piece since Pavan teaches frying as a well-known means to the ordinarily skilled artisan for cooking expanded, three-dimensional snacks. Furthermore, it would have been obvious to one having ordinary skill in the art to use potato flakes since Pavan teaches that using sheeted dual layered dough made from potato has also been a well known in the industry to be used to make three-dimensional snacks. Therefore, to use potato flakes would have been a matter of choice to the ordinarily skilled artisan which would not have provided a patentable feature over the prior art.

Regarding instant claim 15, by teaching a cylindrical cutter having rows of character-shaped cut-outs on its surface, it would have been obvious to one having ordinary skill in the art that the character shaped cut-outs provide a stepped surface on the cutting edge. In this case, by providing multiple cutting edges that extend from the surface of the cylinder, copending Application No. 10/822038 teaches a stepped cutting edge.

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Regarding instant claim 19, copending Application No. 10/822038 teaches a cylindrical cutter having rows of character-shaped cut-outs on its surface (see Claim 2), thus teaching a plurality of cutting segments.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5411390 and US 3427649 teach a rolling die having compressed air to release the dough from the die cavity. US 5388489 and US 4985269 teach cutting dough from a sheet and recycling the scrap and further frying the dough. The cutting is performed by a rolling, cylindrical cutting mechanism. US 5439096 teach a rolling cutter and punching and removing the web scrap in a direction away from the dough piece. US 4535687 teaches using compressed air as an ejector means for removing biscuit dough. US 3947597 teach dough where scrap web moves away from the pieces and a rolling cutting element is used to cut the dough pieces from the sheet. US 4192899 teaches air to remove a piece from the cutting element in making frozen meat patties. US 5671661 teaches using a brush to clean the cutting elements of a metered sheet of food product. US 5919508 teaches stamping dough and using air to release the dough from the stamping die.

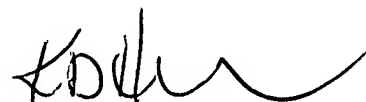
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viren Thakur whose telephone number is (571)-272-6694. The examiner can normally be reached on Monday through Friday from 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571)272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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Examiner
Art Unit: 1761



KEITH HENDRICKS
PRIMARY EXAMINER